

2.8 p. 125129

The Roles of Slope and Intercepts

Equation of the Line

$$y = mx + b$$

m is the steepness of the line
 the greater the magnitude the steeper the line
 positive slope = + value (up and to the right)
 negative slope = - value (down and to the right)
 m = slope (rate of change)

b = y intercept (point at which the line crosses the y axis)

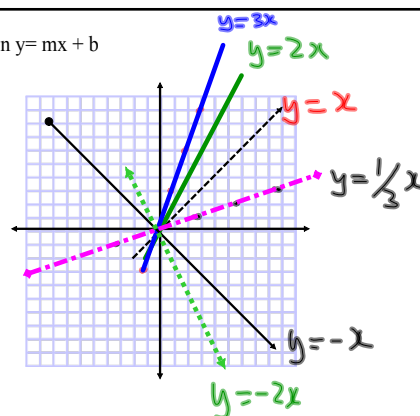
Demonstrate role of m and b using TI83

Intercepts

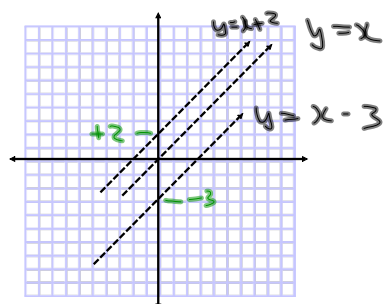
Point at which the line crosses the x axis (x intercept) $y = 0$
 and y axis (y intercept) $x = 0$

Graphed by Substitution

Feb 23-2:29 PM

Role of m in $y = mx + b$ 

Mar 22-10:58 AM

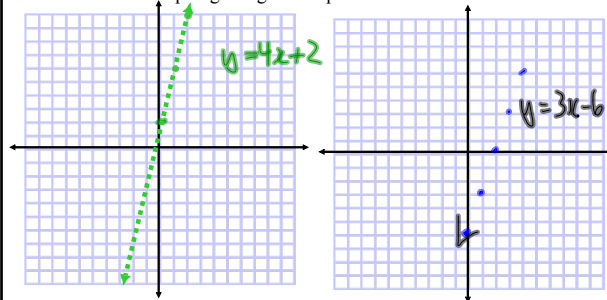
Role of b in $y = mx + b$ 

y intercept - shifts graph
up or down

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$$y = mx + b \quad m = \text{slope} \quad b = \text{yint}$$

Graphing using the Slope / Y int Method



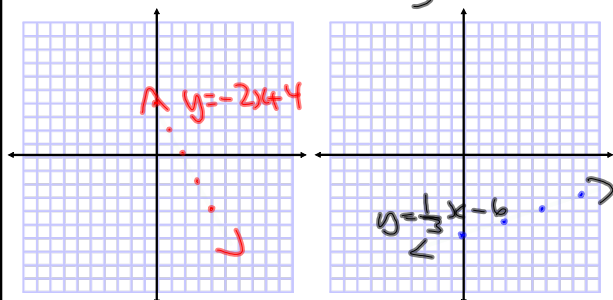
- Plot y int
- Apply the Slope (pattern)

Graphing Using the Slope/Yint Method

Mar 11-8:47 AM

$$y = -2x + 4$$

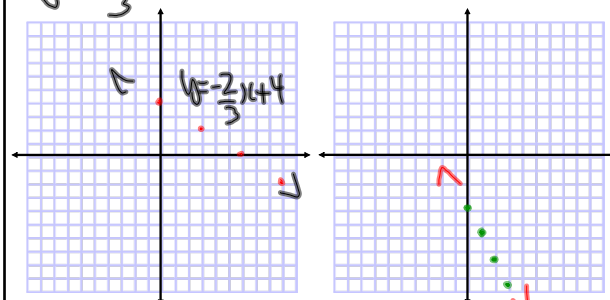
$$y = \frac{1}{3}x - 6$$



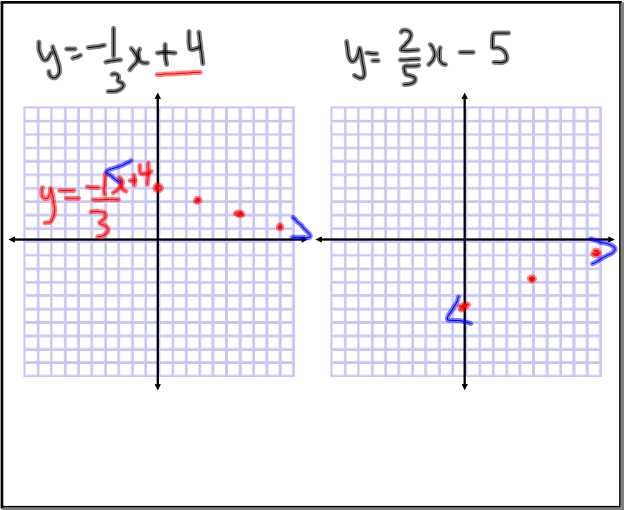
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$$y = -\frac{2}{3}x + 4$$

$$y = -2x - 4$$



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